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COLONY OF THE GAMBIA

ANNUAL REPORT OF THE DEPARTMENT OF AGRICULTURE, FOR THE YEAR ENDING 31st MAY, 1941.

For the second year, this report is presented in an abridged form; meteorological statistics are omitted and statistics for production confined to those of the year under review.

Section I. Agriculture in the Colony and Protectorate.

Meteorology.

1. *Weather.*—Throughout the Protectorate, the early rains were light and erratic. In the Lower River Provinces, these were followed by adequate rains which were well maintained throughout the season and resulted in ideal growing conditions. In the Upper River, rainfall was normal but badly distributed and in the Middle River, the total fall was well below average. At Yoroberi-kunda, the season's fall was only 30·17 inches which is the lowest recorded since statistics were commenced in 1934.

Food Crops.

2. *General.*—It is gratifying to report an increase in food production, the tangible result of which has been not only the complete absence of a 'hungry season' but a welcome internal trade in localised food surpluses. The sum total of these surpluses is still insufficient to meet the total requirements of Bathurst and trading centres but definite progress is being made towards our ultimate goal of self-sufficiency.

3. *Grain crops.*—Throughout the Protectorate, the sorghum and millet crops were excellent with yields well above the average and in the Lower River Provinces, some of the heaviest crops on record were harvested. The area under maize showed a welcome increase, the local variety being a quick maturing type and thus invaluable as an early food. Good crops of rice were harvested in those areas subject to flooding but in those areas dependant on rainfall, the crop was inclined to be light. There was a revival of dryland planting of rice in the Kombo Districts.

4. *Root crops.*—The area under these crops, more particularly cassava, has again shown an increase but this increase must be maintained and intensified, the need being demonstrated by the comparatively high prices obtainable in the local markets where fresh cassava roots freely sell at prices ranging from 0·30d. to 0·85d per lb.

Export Crops.

5. *Groundnuts.*—Production for export was in the neighbourhood of 44,000 tons of undecorticated nuts thus showing a slight increase over the previous year. This figure was higher than expected in view of the increased production of food but groundnut yields were good and there was an almost complete absence of rosette disease. Owing to the international situation and to the fact that the entry of nuts from the neighbouring territories was prohibited, the crop, with the possible exception of only one or two thousand tons, was entirely Gambian and it shows a high rate of production from a total Protectorate population of approximately 200,000.

6. The price, which was again controlled by the United Kingdom Government, remained stable throughout the season at 1s. 1½d. per bushel of 28 lb. at Bathurst and 1s. per bushel at all other buying stations, the prices showing a decrease of 1½d. per bushel on last year's figures.

7. The following quantities of groundnuts were exported during the calendar year 1940:—

Undecorticated nuts—30,270 tons valued at £193,541.
Decorticated nuts—8,922 tons valued at £95,606.

8. Analyses for that part of the 1939-40 crop exported in shell are now to hand and represent one of the cleanest crops yet exported; dust, foreign matter and excess shall totalling only 1·393% against an allowance of 2·00%.

9. *Palm Produce.*—Kernels are the only commodity exported, local demand more than absorbing all the red pericarp oil. Increased exploitation of palm produce is only partly reflected in the increased amount of kernels exported as considerable amounts are used for extraction of the kernel oil, again, for local consumption. During 1940, the following amounts of kernels were exported:—

Palm kernels—749 tons valued at £5,392.

10. *Beeswax.*—Rough wax was purchased at 2½d. per lb. and later at 2d. per lb. These are better prices than those ruling in the previous season but export of clean wax was slightly less at 78,273 lb. valued at £3,543.

Livestock.

11. *General.*—A healthy trade is being developed in the supply of slaughter animals for the Bathurst Market. River transport is being utilised for this purpose and should be further

developed as it helps to prevent the spread of disease and obviates the hazards of a long trek. The success of the anti-rinderpest campaign should result in increasing numbers of cattle becoming available for this trade which, if developed on sound lines, should prevent any danger of over-stocking.

12. *Hides and Skins.*—With the price of hides having fallen to 2d. per lb., the trade for export has come to a comparative standstill. However, this is causing no hardship to the producer as hides are easily disposed of locally in the green state at a comparative price of from 4d. to 6d. per lb. Export figures for 1940 are the lowest recorded for many years:—

Hides—189 cwt. valued at £301.

Skins—1,493 lb. valued at £32.

Pests and Diseases.

13. *Locusts.*—No locusts were reported during the period under review.

14. *Rosette disease of groundnuts.*—Again the disease was almost entirely absent, the few isolated cases reported being confined to late-planted farms.

15. *Citrus disease.*—The mature orange trees in the Kombo Districts which, last year, were reported to be suffering from a condition similar to ' die-back ', have responded satisfactorily to drastic pruning and to nutritional treatment by trench manuring.

Section II.—Work of the Department of Agriculture.

16. Work has continued on the basis of the approved statement of policy, a summary of which is repeated here:—

A. To obtain self-sufficiency in the matter of food production coupled with an improvement in nutrition by the provision of a balanced and more varied diet.

B. The maintenance and improvement of soil fertility and conservation of the soil by the utilisation of balanced systems of crop and animal husbandry.

C. Development of export crops and animal products.

D. Improvement in the preparation and marketing of agricultural produce including produce inspection.

E. Agricultural education and the training of Agricultural staff.

Food Production.

17. *Rice.*—During the year, a series of variety trials of recent rice introductions was laid down at the Irrigation Area attached to the Yoroberi-kunda Experimental Farm. The first year's results point to the excellence of Nigerian No. 5 which amongst the early and medium rices, was outstanding from the first and yielded at the rate of 2,114 lb. dry paddy per acre. The two late rices, D'jougoutes and Bali, yielded well at 2,346 and 2,337 lb. dry paddy per acre.

18. These yield trials will need to continue for two or three years before conclusive results can be obtained and in the meantime the department is continuing its multiplication and distribution of the Guiana Creole and G.E.B. 24 varieties. These two varieties have already proved their superiority over local types and their popularity is undoubted.

19. *Other grain crops.*—The local sorghums are very mixed and bulk selections of the main types have been made and multiplied in preparation for yield trials.

20. *Beans.*—Experimental work on the pulses continues. Pigeon pea grows well in the Gambia and yields up to 1,000 lb. threshed pulse per acre have been obtained. Although it is already grown by a few individual native farmers, it is not generally appreciated. Its value as a cattle fodder and soil improver is undoubted and its possible inclusion in a crop rotation as a ' productive fallow ' is being investigated.

21. Green gram, brought from Nigeria in 1939 will it seems, be a more popular introduction owing to its early maturing quality. Intersown in pigeon pea, a crop of 220 lb. per acre was obtained in the very short growing period of 78 days.

22. The local white cowpea, sown as a straight crop, has given the excellent average yield of 510 lb. pulse per acre and propaganda towards popularising this valuable source of protein continues, just under one ton of seed having been distributed to selected farmers during the year.

23. *Dry Season Gardening.*—Demonstrations of vegetable cropping were undertaken at all stations and demonstration areas during the dry season. Tomatoes, peppers, lettuce, cabbage and shallots were the main vegetables grown. Seedlings were raised for distribution mainly to those villages which had not previously undertaken this work; 10,000 tomato seedlings of the ' Marglobe ' variety were issued from the Cape St. Mary Nurseries alone.

24. Jerusalem Artichokes and fresh seed bulbs of shallots were introduced from England for trial and multiplication.

At Basse, crops of wheat and onions were raised under irrigation. The wheat yield was low at 609 lb. per acre but investigational work on the crop will continue.

25. *Fruit trees.*—Work continues on the raising and distribution of seedlings, mainly of selected Kombo orange and of Kola. The first village plantation of one hundred kola seedlings was laid out at Medina Sering Mas, North Bank Province, and the end of the first dry season showed the satisfactory survival rate of 92%.

26. An experiment in the grafting of cultivated kola (C.acuminata) on to the wild kola (C.cordifolia) was inaugurated and sufficient healthy plants obtained for a comparative field trial of the grafted plant and the kola seedling. The wild kola thrives in drier parts of the protectorate.

27. Intensive propaganda has been carried out for the raising of pawpaw seedlings and the efficient distribution of available banana suckers with a view to meeting the present heavy demand for fruit in the Bathurst area.

Maintenance and Fertility.

28. Experimental work on the manufacture and application of farmyard manure and on crop rotation has continued. The marked response of the larger grain crops to, by English standards, the very small dressings of 1 ton and 2 tons per acre of farmyard manure was again demonstrated.

29. *Family Unit Demonstrations.*—Eight such units were in operation during the year based on mixed farming methods—demonstrating the use of cattle both for work and for manure making.

30. There is some indication that the normal cattle population of a mixed farming unit—two or three beasts—will provide insufficient farmyard manure to maintain the fertility of a full sized holding. Production per head of the comparatively small Gambian beast certainly does not exceed 1½ tons per annum and investigations are being pursued in utilising the stall product to convert the surplus crop residues, such as sorghum and millet stalks, into compost. At one unit, 2½ tons of farmyard manure were by this mean converted into 8 tons of compost.

31. The Gambian cattle show an immunity to infection from tse-tse fly which are prevalent throughout the Protectorate. Such immunity however is weakened if the cattle are overworked or suffer any setback in the course of training and this danger must be borne in mind in introducing mixed farming. That it can be met is being proved on the department's farms by controlling working hours of the cattle and by supplementary feeding.

32. Intensive propaganda and encouragement in the use of village refuse for farmland and riceland cultivations is having some effect particularly in the North Bank Province where the movement is being assisted by the use of cattle carts.

Export Crops.

33. *Groundnuts.*—The effectiveness of measures concerning lifting dates, storage, etc., is reflected in the cleanliness of the crop marketed. Yield trials of local selections and introductions continue. ' Sir Charles ' which had shown continued superiority, this year gave a slightly lower yield than ' Basse ', an early local selection and although the difference was statistically insignificant, the trial will continue for a further year. In the meantime, the Yoroberi-kunda village area has been swamped with ' Sir Charles ' seed and will be a source of supply when necessary.

34. The encouragement of other products with the possibility of export trades when local demand has been satisfied include tobacco, citrus fruits, peppers and cassava products.

35. With regard to tobacco, seed and seedlings are being distributed and although still on a very small scale, locally cured samples of leaf from ' Blue Pryor ' tobacco have found a ready sale at prices competitive with the imported product.

Agricultural Education.

36. As in the past, advice was given to schools on the running of their gardens whenever possible. At the Armitage School, Georgetown, the farm of about 8 acres has been worked by the boys on mixed farming lines, using their own pair of cattle for ploughing and the manufacture of farmyard manure and employing a simple rotation of crops. Compost is also made utilising crops residues and the effluent from a septic tank latrine. Ploughing demonstrations have also been carried out at the Anglican and Roman Catholic Schools at Basse in the Upper River Province.

Advice and instruction in agricultural methods have also been given to the Prisons at Bathurst and Kerewan.

37. *Garden Produce Shows.*—Seven of these village shows were held in the Protectorate during the year and have proved of great value in popularising dry-season gardening. The average number of exhibits was 621 per show and with the exception of the Jowarra show, all the exhibits were grown and brought in by peasant farmers. It is interesting to note that a fair proportion of the prizes were won by women.

38. Practical demonstrations were undertaken by the department at each show and included the preparation of cassava products, the manufacture of tomato puree, oil extraction, etc.

39. Local arts and crafts were well represented and gave encouragement to local industry.

40. The Shows were organised by the Commissioners of the provinces and the Agricultural Staff and I wish to record my thanks to the Gambia Horticultural Society and to individuals whose willing help and monetary assistance made the holding of these Shows possible.

41. *Agricultural Committees.*—A valuable innovation has been instituted in the North Bank Province where the Commissioner and Agricultural Superintendent have sponsored the formation of District and Regional Agricultural Committees. The villagers appoint their own members to the District Committees which in turn elect their representatives on the two Regional Committees. These committees in their first year have already proved their value in conveying propaganda, providing crop estimates, facilitating the exchange and distribution of seed and planting material, etc., and their progress is being carefully watched with a view to the adoption of the system in the other provinces.

42. *Staff.*—Four new African appointments have been sanctioned in the form of Agricultural Learners. Three of these appointments have already been filled with boys from the Armitage School and with further specialised training, they should prove a valuable addition to the staff.

43. The appointment of District Agricultural Badge Messengers in two of the four Provinces of the Protectorate has greatly assisted our staff in general extension propaganda and produce inspection work in those areas.

SECTION III.

Omitted.

SECTION IV.

44. *Legislation.*—The Control of Groundnuts Regulations, 1940 prohibits the importation of any groundnuts into the Gambia.

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Senior Agricultural Superintendent.

29th August, 1941.

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